

## STATEMENT OF LEGAL AND FACTUAL BASIS

MW Manufacturers, Inc.  
433 North Main Street- Rocky Mount, Virginia  
Permit No. VA-30386  
Permit Date: **September 28, 2001**  
AIRS ID No. 51-067-0023

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, MW Manufacturers, Inc. has applied for a Title V Operating Permit for its window and door manufacturing , Rocky Mount facility. The Department has reviewed the application and has prepared a Title V Operating Permit.

## FACILITY INFORMATION

<u>Permittee</u>	<u>Facility</u>
MW Manufacturers, Inc. P.O. Box 559 Rocky Mount, Virginia 24151	MW Manufacturing, Inc. 433 North Main Street Rocky Mount, Virginia 24151

Date: **September 28, 2001**

## SOURCE DESCRIPTION

SIC Code 2431 –Establishments primarily engaged in manufacturing fabricated wood millwork, including wood millwork covered with materials such as metal and plastics.

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This plant primarily manufactures wood and vinyl clad windows and doors. The plant has been in existence at its current location since the 1940's and the plant received it's first air permit on June 27, 1974. The facility is a Title V major source of VOC and Sulfur Dioxide. This source is located in an attainment area for all pollutants, and is a PSD major source due to permitted VOC emission limits. The facility is presently permitted under a Minor NSR Permit issued on 04/12/1999, amended 5/21/2001.

## **COMPLIANCE STATUS**

The facility is inspected a minimum of once per year. The facility was inspected and found to be in compliance on 6/26/2001.

### EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility consist of the following :

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
<b>Fuel Burning Equipment</b>							
Boiler	1	CNB Tri-Fuel	21.32coal/17 wood MMBtu/hr	Multicyclone	MC-1	Particulate	4/12/1999 as amended
<b>Solvent Based Wood Dipping Operations</b>							
2	2	Main tank	Varies by soak length	Uncontrolled	--	--	4/12/1999 as amended
2a	--	Long Tank	2.0 gals/hr	Uncontrolled	--	--	4/12/1999 as amended
2b	4	Short Tank	2.0 gals/hr	Uncontrolled	--	--	4/12/1999 as amended
<b>Water Based Wood Dipping</b>							
3	--	Water-based wood preservative dipping operation	Varies by soak length	Uncontrolled	--	--	4/12/1999 as amended
<b>Priming Operations</b>							
4	--	Wood parts priming operations (6 separate; all use 'water-based' or 'low-solvent' coatings	4.8 gals/hr each	Uncontrolled	--	--	4/12/1999 as amended
4a	4	Paint Spray booth	2 gals/hr	Spray booth with paper/fiberglass filters	F-1	Particulate	4/12/1999 as amended
<b>Milling Operations</b>							
5	5 & 6	Wood milling/machining	Varies by type of unit	Pneumafil	BH-1 & BH-2	Particulate	4/12/1999 as amended

\*The Size/Rated capacity is provided for informational purposes only, and is not an applicable requirement.

## EMISSIONS INVENTORY

A copy of the 1998 Emission Statement Form is attached as Attachment A. Emissions are summarized in the following tables. *Emission amounts are listed as tons per year (tpy).*

1998 Actual Emissions Criteria Pollutants					
Emission Unit	VOC	CO	SO <sub>2</sub>	PM <sub>10</sub>	NO <sub>x</sub>
Boiler (coal)	0.36	NA	8.73	17.45	2.67
Boiler (wood)	0.14	NA	0.09	2.87	0.98
Water based wood preservative	20.2	NA	NA	NA	NA
Solvent based wood preservative	124.0	NA	NA	NA	NA
Glass sealing process	0.1	NA	NA	NA	NA
Water based Frame Priming	2.1	NA	NA	NA	NA
Water based enamel coat	1.1	NA	NA	NA	NA
Wood working operations	NA	NA	NA	5.24	NA
<b>TOTALS</b>	147.64	NA	8.82	25.56	3.65

### Facility Hazardous Air Pollutant Emissions

***Not Applicable***

## EMISSION UNIT APPLICABLE REQUIREMENTS

The applicable emission unit requirements are for the entire facility. These requirements include the fuel burning equipment (boiler), woodworking equipment, wood preservative operations (water and solvent-based), and wood priming operations.

## Limitations

The following applicable limitations are State BACT requirements from the Minor NSR Permit issued on April 12, 1999. A copy of the permit is attached as Attachment B:

1. Condition 4, requiring a multicyclone be used to control particulate emissions from the coal/wood boiler. (9 VAC 5-80-10H and 9 VAC 5-50-260)
2. Condition 8 and 15, limiting fuels for boiler to coal and wood and limiting maximum sulfur content of coal to one (1) percent by weight per shipment. (9 VAC 5-20-110 and 9 VAC 5-50-50, respectively)
3. Condition 16, limiting emissions from the coal/wood boiler to 2 lbs/hr and 10 tons a year for particulate matter and PM<sub>10</sub>; 56 lbs/hr and 135 tons a year for sulfur dioxide; and 2.51 lbs/hr and 11 tons a year for volatile organic compounds. (9 VAC 5-50-260) The formula listed in 9 VAC 5-40-930 was used to determine a lbs/hr SO<sub>2</sub> limit. The annual limit for VOC was converted to lbs/hr to obtain a short term emission limit.
4. Condition 23, limiting visible emissions from the coal/wood boiler to twenty (20) percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed thirty (30) percent opacity. (9 VAC 5-20-110 and 9 VAC 5-50-20)
5. Condition 32, requiring proper maintenance and training for boiler operators. (9 VAC 5-50-20 E)
6. Condition 3, requiring that the dip tanks for the water-based and solvent-based wood preservative dip system be covered when the department is not in operation to minimize VOC emissions. (9 VAC 5-80-10)
7. Conditions 9, 10, 11, 12, 13, and 14, limiting the annual throughput of the following operations, calculated monthly as the sum of each consecutive twelve (12) month period. Cut stock lumber -  $20.0 \times 10^6$  board feet; solvent-based wood preservative dipping – 105,000 gallons; water-based wood preservative dipping(after reduction) – 100,000 gallons; glass sealant – 80,000 gallons; water-based frame primer – 30,000 gallons, water-based enamel on the frame primer – 4,000 gallons. (9 VAC 5-20-110)
8. Condition 24, limiting visible emissions from the baghouses to five (5) percent opacity

- except during one six-minute period in any one hour in which visible emissions shall not exceed 30 percent. (9 VAC 5-20-110 and 9 VAC 5-50-20)
9. Condition 17, limiting particulate emissions from the wood working equipment/wood dust handling processes to 0.01 gr/dscf, 3.9 lbs/hr, and 9.6 tons per year for particulate matter and PM<sub>10</sub>. (9 VAC 5-80-10 and 9 VAC 5-80-30)
  10. Condition 18, limiting volatile organic compound emissions from the solvent-based wood preservative dip systems to 78.9 lbs/hr and 322.3 tons per year. The fugitive and stack VOC emissions are combined to determine the lb/hr and tons/yr emissions. (9 VAC 5-50-260)
  11. Condition 19, limiting volatile organic compound emissions from the water-based preservative dip systems to 9.3 lbs/hr and 40.9 tons per year. (9 VAC 5-50-260)
  12. Condition 20, limiting volatile organic compound emissions from the glass sealing process to 15.7 lbs/hr and 57.2 tons a year. (9 VAC 5-50-260)
  13. Condition 21, limiting volatile organic compound emissions from the water-based frame priming system to 27.8 lbs/hr and 23.7 tons per year. (9 VAC 5-50-260)
  14. Condition 22, limiting volatile organic compound emissions from the water-based frame priming system when using enamel to 6.3 lbs/hr and 4.2 tons per year. (9 VAC 5-50-260)
  15. Condition 5, requiring particulate emissions from the wood dust handling systems be controlled by baghouses. The baghouse shall be provided with adequate access for inspection. (9 VAC 5-50-260)
  16. Condition 6, requiring the water-based wood primer spray booth designated as source 4a be controlled by paper filters or fiberglass filters. The filter system shall be provided with adequate access for inspection. (9 VAC 5-50-260)
  17. Condition 7, requiring all subsequent transfer of the collected material from the baghouse be controlled by baghouse or a completely enclosed transfer system. (9 VAC 5-50-260)

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

*9 VAC 5-50-10 D New and Modified Stationary Sources; D, The provisions of 9 VAC 5 Chapter 40 (9 VAC 5-40-10 et seq.), unless specified otherwise, shall apply to new and modified sources to the extent that those provisions thereof are more restrictive than the provisions of this chapter, 9 VAC 5 Chapter 80 (9 VAC 5-80-10 et seq.), or any permit issued pursuant to 9 VAC Chapter 80 (9 VAC 5-80-10 et seq).*

*9 VAC 5-40-930 Emission Standards for Fuel Burning Equipment; Standards for Sulfur Dioxide – No owner or other person shall cause or permit to be discharged into the atmosphere from any fuel burning equipment installation any sulfur dioxide emissions in excess of the following limits:  $S = 2.64 (K)$  where S = allowable emission of sulfur dioxide expressed in pounds per hour and K= heat input at total capacity expressed in (Btu x  $10^6$  per hour)*

*9 VAC 5-80-1700 et seq. Permits for Stationary Sources, Major Stationary Sources and Major Modifications Locating in Prevention of Significant Deterioration Areas.*

*9 VAC 5-170-160 Regulation for General Administration, Conditions on Approval, The board may impose conditions upon permits and other approvals which may be necessary to carry out the policy of the Virginia Air Pollution Control Law, and which are consistent with the regulations of the board.*

*9 VAC 5-50-260 Standards of Performance for Stationary Sources, BACT*

## **Monitoring**

The monitoring and recordkeeping requirements in the NSR permit dated 04/12/1999 (as amended) have been modified to meet Part 70 requirements.

The permittee will obtain a fuel certificate, with each shipment of coal, which shall include the name of the supplier, the date the coal was received, and the sulfur content of the coal. The permittee will monitor and record on a monthly basis fuel use to demonstrate compliance with the criteria pollutant, maximum fuel sulfur content and fuel use limitations. The lb/hr SO<sub>2</sub> limit will be calculated using information from AP-42, 1.1 Bituminous and Sub-bituminous Coal Combustion, Table 1.1-3. The lb/hr VOC limit will be calculated using information from AP-42, 1.6 Wood Waste Combustion in Boilers, Table 1.6-3, TOC (Total Organic Carbon) for a stoker boiler. The permittee shall conduct a visual observation of the boiler stack at least once a calendar week, using Method 22 and/or Method 9 to demonstrate compliance with the visible emission requirement.

The permittee will monitor and record on a monthly basis the following throughputs:

1. Solvent-based and water-based wood preservative
2. Glass sealant
3. Water-based frame primer
4. Water-based enamel used on the frame primer
5. Cut stock lumber

The above mentioned throughputs shall be used to calculate annual VOC and Particulate emissions to demonstrate compliance with the limitations contained in the permit. A requirement to keep MSDS or CPDS information was added to the permit per EPA comments on the draft permit

The permittee will monitor and record on a monthly basis the throughput of cut stock lumber. The permittee shall conduct a visual observation of the baghouse stacks at least once a calendar week, using Method 22 and/or Method 9 to demonstrate proper operation/maintenance and compliance with the visible emission requirement and the particulate emission limits.

### **Recordkeeping**

The permit includes requirements for maintaining records of all monitoring and testing required by the permit. These records include fuel throughputs, fuel certification certificates, wood preservative throughputs, glass sealant throughputs, frame primer throughputs, enamel throughputs, stock lumber throughputs, records of visual emission observations, records of visible emissions evaluations, and emission calculations for criteria pollutants.

### **Testing**

The permit does not require source tests. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

### **Reporting**

(See General Conditions)



## **Streamlined Requirements**

The existing source SO<sub>2</sub> and particulate limits have been streamlined out of the Title V permit. The emission limits for SO<sub>2</sub> from the boiler, type of fuel and coal sulfur content result in a more stringent requirement. Permitted particulate limits are also more stringent than the existing source regulations

## **GENERAL CONDITIONS**

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110, that apply to all Federal operating permit sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions, including those caused by upsets, within one business day.

## **STATE ONLY APPLICABLE REQUIREMENTS**

The permit does not contain any state-only applicable requirements.

## **FUTURE APPLICABLE REQUIREMENTS**

Does not apply at this time.

## **INAPPLICABLE REQUIREMENTS**

Currently inapplicable requirements identified by the applicant include the following:

### **40 CFR Part 60: New Source Performance Standards**

No federal New Source Performance Standards (NSPS) apply to this facility at this time.

### **40 CFR Parts 61 and 63: National Emission Standards for Hazardous Air Pollutants (NESHAPs)**

No National Emission Standards for Hazardous Air Pollutants (NESHAPs) apply to this facility at this time. The plant is not a major source of regulated hazardous air pollutants.

### **40 CFR Part 68: Chemical Accident Prevention**

Substances contained in the Clean Air Act Section 112(r) list (given in 40 CFR Part 68) are not stored at the facility in quantities that exceed the applicable thresholds. Therefore, a risk management program and Risk Management Plan (RMP) will not be required at this facility.

## COMPLIANCE PLAN

Does not apply at this time.

## INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Insignificant emission units include the following:

Emission Unit No.	Emission Unit Description	Citation <sup>1</sup>	Pollutant(s) Emitted	Rated Capacity
IEM-1	Diesel tank	9 VAC 5-80-720 B	VOC	12,000 gals.
IEM-2	LP gas tanks (2)	9 VAC 5-80-720 B	VOC	1,000 gals. Each
IEM-3	Diesel tank	9 VAC 5-80-720 B	VOC	275 gals.
IEM-4	Glass cutting operation	9 VAC 5-80-720 B	VOC	Cutting lubricant fluid is used in very small amounts
IEM-5	Glass sealing operation	9 VAC 5-80-720 B	VOC	2-part epoxy sealant; very low VOC content
IEM-6	Seal patching	9 VAC 5-80-720 B	VOC	Hot melt adhesive(essentially zero VOC's)
IEM-7	Inkjet coding of spacer frames	9 VAC 5-80-720 B	VOC	Quantities of ink used are very small
IEM-8	Grille assembly	9 VAC 5-80-720 B	VOC	Very small quantities of VOC's are used
IEM-9	Grinding room cleaning vat (parts cleaner)	9 VAC 5-80-720 B	VOC	Quantities of VOC's used are very small
IEM-10	Grinding room saw blade sharpening lubricant	9 VAC 5-80-720 B	VOC	Quantities of VOC's used are very small
IEM-11	Octagon window assembly	9 VAC 5-80-720 B	VOC	Very small amounts of VOC's are used
IEM-12	Insulated glass maintenance shop parts cleaning sinks (2)	9 VAC 5-80-720 B	VOC	Safety-Kleen sink
IEM-13	Back-bedding compounds used throughout window assembly area	9 VAC 5-80-720 B	VOC	Very low VOC content
IEM-14	Casement assembly vinyl adhesive	9 VAC 5-80-720 B	VOC	Very low VOC content
IEM-15	Twinsal vinyl adhesive	9 VAC 5-80-720 B	VOC	Very low VOC content

Emission Unit No.	Emission Unit Description	Citation <sup>1</sup>	Pollutant(s) Emitted	Rated Capacity
IEM-16	Wood double hung; vinyl double hung sealant	9 VAC 5-80-720 B	VOC	Very low VOC content
IEM-17	V-wood backbedding(glass/vinyl)	9 VAC 5-80-720 B	VOC	Very low VOC content
IEM-18	Vinyl clad double hung adhesive cleaner	9 VAC 5-80-720 B	VOC	Very low VOC content
IEM-19	Twinseal vinyl	9 VAC 5-80-720 B	VOC	Very low VOC content
IEM-20	Vinyl clad double hung adhesive	9 VAC 5-80-720 B	VOC	Very low VOC content
IEM-21	Simulated Divided Light Solvent	9 VAC 5-80-720 B	VOC	Very low VOC content
IEM-22	Product development and testing lab	9 VAC 5-80-720 A	VOC's, others	NA
IEM-23	Drying ovens for spray priming operations	9 VAC 5-80-720 C	Fuel burning emissions	Less than 10 MMBtu/hr each, firing natural gas

<sup>1</sup>The citation criteria for insignificant activities are as follows:

9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application

9 VAC 5-80-720 B - Insignificant due to emission levels

9 VAC 5-80-720 C - Insignificant due to size or production rate

## CONFIDENTIAL INFORMATION

The permittee did not submit a request for confidentiality. All portions of the Title V application are suitable for public review.

## PUBLIC PARTICIPATION

The draft permit was placed on public notice in the Roanoke Times from July 8, 2001 to August 7, 2001. Only EPA submitted comments. The proposed permit was forwarded to EPA on August 14, 2001. The EPA 45 day review period ended on September 28, 2001.